



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

MEMORANDUM TO: Project Engineers
Project Design Engineers

FROM: G. R. Perfetti, P. E.
State Bridge Design Engineer

DATE: February 4, 2003

SUBJECT: SOUND BARRIER WALLS

Due to recent code changes and construction difficulties, the sound wall standards and design aids have been revised and are attached.

The 20' (6.1 m) pile spacing option has been eliminated and the pile selection tables have been revised. The revised pile selection tables are located within the Microstation standard SBW1 (SM) file. In addition, the wind pressures, panel reinforcing, lagging stop details and formulas for calculating loads to be submitted to the Soils and Foundations Unit have been revised.

The dead load, ice load, and wind loads have been considered in the panel and pile design. For walls subject to any additional loadings, the pile and panel shall be designed on a case by case basis. In addition, walls exceeding 29 feet (8.840 m) in height shall be designed on a case by case basis.

This policy is effective with the April 2003 letting. The standard drawings are available on both the S: Drive and the Structure Design Homepage. The Sound Barrier Wall Special Provision has been revised to include this policy change and the Design Manual will be revised at a later date.

GRP/JTE

Attachments

[Figure 12-24 \(English\)](#)
[Figure 12-24 \(Metric\)](#)
SBW1
SBW2
SBW1SM
SBW2SM

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Cc: P. A. Simon, FHWA, with attachment
R. V. Keith, P. E., with attachment
R. A. Raynor, P. E., with attachment
C. O. Wiggins, P. E., with attachment
R. A. Hancock, P. E., with attachment
M. Mulla, P. E., with attachment
J. A. Bennett, P. E., with attachment